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Records of the Boarmiini (Geometridae, Ennominae) from Thailand IV

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Abstract 13 species of Boarmiini are recorded from Thailand, with descriptions of six new species: *Ophthalmitis ogatai*, *Ramobia moriutii*, *Abaciscus manoi*, *Diplurodes sakuraii*, *Diplurodes stueningi*, *Diplurodes longisacculus* spp. nov.

Key words Geometridae, Ennominae, Boarmiini, new species, Thailand.

The present paper is the fourth part of the Boarmiini from Thailand, following my previous papers (Sato, 1991, 1995, 1996), mainly based on the collections of the Lepidopterological Expeditions of the University of Osaka Prefecture (now Osaka Prefecture University) to Thailand in 1981, 1983, 1985 and 1987, and the Overseas Scientific Research Project of the National Science Museum, Tokyo, in 1983 and 1987. Some specimens in European museums and Mr Sommerer's collection, and my own collection are added. The detailed accounts of the Lepidopterological Expeditions of the Osaka Prefecture University to Thailand were given by Kuroko & Moriuti (1987) and Moriuti (1989).

In this paper 13 species of the following genera are recorded, with descriptions of six new species: *Ophthalmitis* Fletcher, *Ramobia* Inoue, *Abaciscus* Butler, *Calcyopa* Stüning, *Diplurodes* Warren, *Ectropidia* Warren. The rest of the boarmiid genera and species from Thailand will be recorded in my future papers.

Abbreviations. Collectors. K: Hiroshi Kuroko. M: Sigeru Moriuti. S: Toshihisa Saito. A: Yutaka Arita. Y: Yutaka Yoshiyasu. The location of the type specimens. BMNH: The Natural History Museum, London. MS: Manfred Sommerer collection, Munich. NIAES: Natural Resources Inventory Center, National Institute for Agro-Environmental Sciences, Tsukuba. NSMT: National Science Museum, Tokyo. OPU: Entomological Laboratory, Osaka Prefecture University, Sakai. ZFMK: Zoologisches Forshungsinstitut und Museum Alexander Koenig, Bonn. ZMC: Zoological Museum, Copenhagen. ZSM: Zoologische Staatssammlung, Munich.

Ophthalmitis exemptaria (Walker)

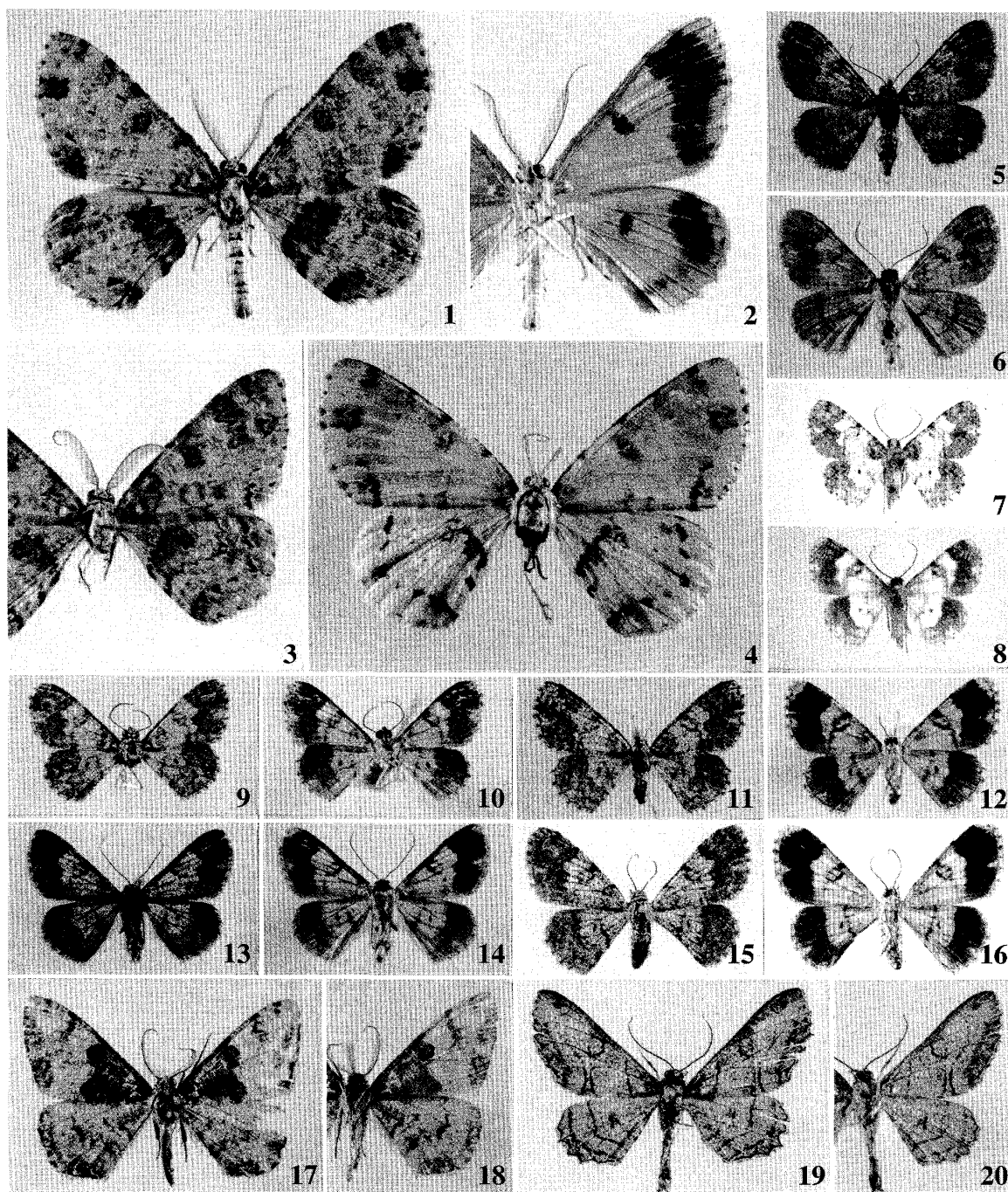
Ophthalmodes exemptaria Walker, 1860, *List Specimens lepid. Insects Colln Br. Mus.* **21**: 447.

S. Thailand, Nakhon Si Thammarat, Tha Sala, Kra Raw, Kan Leong 650 m, Khao Luang Natn. Pk., 1 ♂, 7–8. viii. 1987 (M. Owada).

Ophthalmitis pertusaria (Felder & Rogenhofer)

Boarmia pertusaria Felder & Rogenhofer, 1875, *Reise öst. Fregatte Novara* (Zool.) **2**: (Abt.2): pl. 125, fig. 17.

Chiang Mai, Doi Pui 1,400 m, Phu Phing Palace, 1 ♂, 7–9. ix. 1987, Petchabun, Lom Sak, Nam Nao 800 m, 1 ♂, 18–19. viii. 1987 (M. Owada), Loei, Phu Rua 800 m, 1 ♂, 15–19. viii. 1987 (M. S. A. Y.).



Figs 1–20. Boarmiini of Thailand. 1–4. *Ophthalmitis ogatai* sp. nov. 1–2. Holotype, ♂, Sumatra. 3. Paratype, ♂, S. Thailand. 4. Paratype, ♀, Sumatra. 5–16. *Diplurodes* spp. 5–6. *D. stueningi* sp. nov. Holotype, ♂, Thailand. 7–12. *D. longisacculus* sp. nov. 7–8. Holotype, ♂, Thailand. 9–10. Paratype, ♂, P. Malaysia. 11–12. Paratype, ♀, Thailand. 13–16. *D. sakurarii* sp. nov. 13–14. Holotype, ♂, Thailand. 15–16. Paratype, ♀, Thailand. 17–18. *Ramobia moriutii* sp. nov. Holotype, ♂, Thailand. 19–20. *Abaciscus manoi* sp. nov. Holotype, ♂, Thailand. 7 & 8. Photos by Dr Stüning.

***Ophthalmitis ogatai* sp. nov.** (Figs 1–4)

Length of forewing 27–29 mm, wingspan 41–47 mm. Very similar to *O. rufilauta* (Prout, 1925) from Borneo. Distinguished from the other congeners in Thailand by brown shading between antemedial line and discocellular marking on hindwing, but not reliably distinguishable from *rufilauta* in wing colour and pattern. Best identified by examination of the male and female genitalia.

Male genitalia (Fig. 24). Similar to those of *rufilauta*. Uncus more robust, the apical portion shorter, blunter; cucullus slenderer; saccular process longer, extending beyond distal margin of valva; basal spine-like process longer and stouter; saccus less elongate; aedeagus with a massive lateral spine. Posterior end of the eighth abdominal sternite as shown in Fig. 25. Male genitalia and the eighth abdominal sternite of *rufilauta* were shown by Holloway (1994, figs 455 & 456).

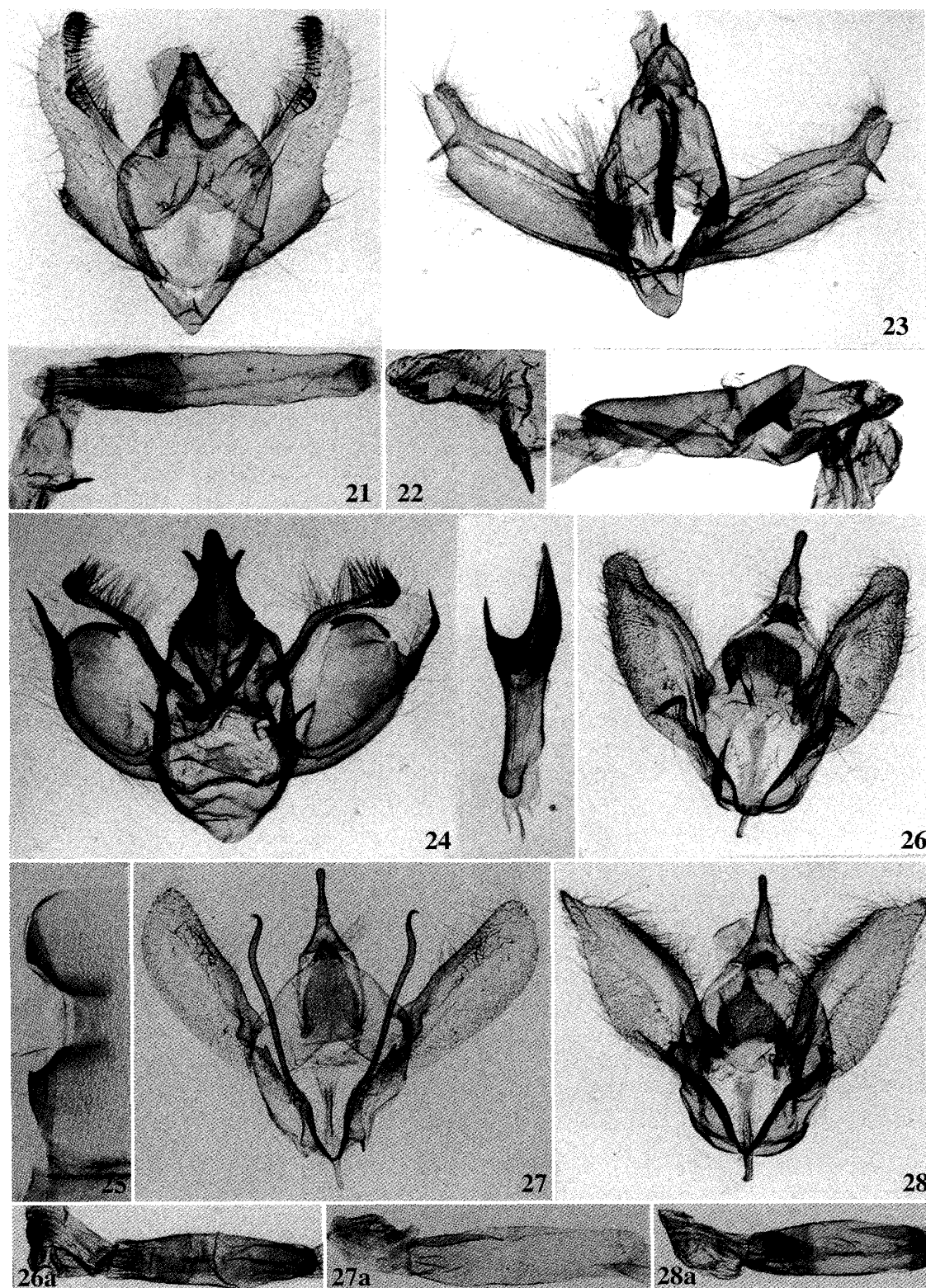
Female genitalia (Fig. 29). Similar to those of *rufilauta*, but Holloway, referring to Sumatran material here included in *ogatai*, stated “the sterigma is more complex, more heavily sclerotised [than *rufilauta*]” (Holloway, 1994: 228). The female of *rufilauta* is unknown to me.

Holotype. ♂, N. Sumatra, Simalungun, SR2, 11 km off Sindar Raya 400 m, 16. iii. 1989 (E. W. Diehl), NIAES. Paratypes. S. Thailand. Nakhon Si Thammarat, Tha Sala, Nop Pitam, Khao Luang Natn. Pk. H. Q. 120 m, 1 ♂, 6. 9. viii. 1987 (M. Owada), NSMT. Khao Chong, Trang, 1 ♂, 10. xii. 1987, 1 ♂, 23. i. 1998 (A. Pinratana), in Pinratana's Coll., Bangkok. Sumatra. Type locality, 1 ♂, 14. iii. 1991, 1 ♂, 9. v. 1991 (E. W. Diehl), NIAES. Type locality, 1 ♂, 31. iii. 1992, Aceh, Pulau Wé, 1 ♂, 25–27. iii. 1993, Gunung Malayu vic. Aek Tarum 150 m, 1 ♀, 9. i. 1983, Aek Tarum, 1 ♂, 2. vii. 1978 (praep. MS 1992–98), Gunung Malayu 150 m, 2 ♂, 18. xi. 1982 (praep. MS 1995–128), *ditto* 80 m, 1 ♂, 4–5. v. 1983, Aceh or., Idi 50 m, 1 ♂, 4. xii. 1970, Dolok Merangir 170 m, 1 ♂, 5. ix. 1975, 1 ♂, 20. iii. 1976, Aek Tarum 250 m, 1 ♀, 28. x. 1978 (E. W. Diehl), MS. S. Sumatra, Baturaja 200 m, 2 ♂, 1. xi. 1981 (A. Schintlmeister), NIAES. 1 ♂, “W. Sumatra, Lebong Tandai, 1920–1923, C. J. Brooks, B. M. 1936–681/Geometridae genitalia slide No. 13159”, 1 ♀, “SUMATRA, Lebong Tandai, 8. 1. 1922, C. J. Brooks, B. M. 1936–681/Geometridae genitalia slide No. 13154”, 1 ♂, “Lebong Tandai, W. Sumatra, 20–27. 1. 1922, C. J. Brooks coll. No. 5664/C. J. Brooks, B. M. 1936–681”, 1 ♂, “49. 24, Lebong Tandai, Benkoelen, Sumatra, Nov. 1921, C. J. Brooks/Joicey Bequest, Brit. Mus. 1934–120/Geometridae genitalia slide No. 13160”, 1 ♂, “Marang, SO. Sumatra, W. Dcherty 1890/Ex Oberthür Coll. Brit. Mus. 1927–3”, BMNH. Peninsular Malaysia. Perak, Taiping, 1 ♂, 8. vi. 1987, 1 ♂, 10. vi. 1987, 1 ♂, 12. vi. 1987, 1 ♂, 5. vii. 1987 (native collector), Taiping, Bukit Larut 1,113 m, 1 ♂, 22. viii. 1990 (T. Yasunaga), NIAES. Cameron Highlands, Rd. Tapah-Tanah Rata 800 m, 1 ♂, 30. vii. 1991 (J. Haxaire), ZSM.

Geographical range. Thailand, Peninsular Malaysia, Sumatra. In Thailand this species seems to be confined to the southern part.

Holloway (1994) mentioned that Sumatran “*rufilauta*” had distinct differences in the male and female genitalia, compared with those of Bornean material, and that those differences indicated the specific status of Sumatran material.

Etymology. The present new species is dedicated to the late Dr Masami Ogata, a former president of the Lepidopterological Society of Japan, who passed away on August 2004. He gave me valuable advice and constant encouragement on numerous occasions for a long time.



Figs 21–28. Male genitalia. 21–22. *Ramobia moriutii* sp. nov. RS-6276. 22. Cornutus. 23. *Abaciscus manoi* sp. nov. RS-6273. 24–25. *Ophthalmitis ogatai* sp. nov. RS-6007. 25. 8th abdominal sternite. 26–28. *Diplurodes* spp. 26. *D. sakuraii* sp. nov. RS-6260. 27. *D. longisacculus* sp. nov. RS-4241. 28. *D. stueningi* sp. nov. RS-6323. a: aedeagus.

***Ramobia moriutii* sp. nov.** (Figs 17–18)

Male. Similar to *R. mediodivisa* Inoue from Japan in having forewing with a wide paler area between medial and submarginal lines, but differs from it as follows. Smaller in size; length of forewing 19 mm, wingspan 33 mm, while in *mediodivisa* 22–24 mm and 37–41 mm, respectively, both wings darker in colour, more densely irrorated with brown. Forewing: antemedial line less defined; medial line strongly excurved beyond discocellular black streak and between veins CuA_2 and A_1 , while in *mediodivisa* right-angled on or near discocellular streak, then running vertically to inner margin; postmedial line visible at anterior half. Hindwing: postmedial dentate line broader. Underside darker with more distinct maculation reproduced as on upperside. Also similar to *R. basifuscaria* (Leech) from Japan and *R. anmashana* Sato from Taiwan, but can be easily distinguished by shorter antennal pectinations. Female unknown.

Male genitalia (Figs 21–22). Most similar to those of *basifuscaria* (Sato, 2002, fig. 22) among the congeners, but distinguished from them in the following characteristics. Uncus with narrower apical part; gnathos with medial part less sclerotized, bluntly rounded apically, not triangular as in *basifuscaria*; valva with a cluster of spines almost at middle of costa, spines longer and less in number; ventral margin of valva strongly concaved basally; saccus pointed at apex; aedeagus less sclerotized, a horn-like cornutus much shorter. Also similar to those of the other congeners, but can be easily separated from them by distinctly curved ventral margin of valva.

Holotype. ♂, N. Thailand, Chiang Mai, Doi Inthanon 2,450 m, 23. v. 1987 (M. G. Allen), NIAES.

Geographical range. Thailand.

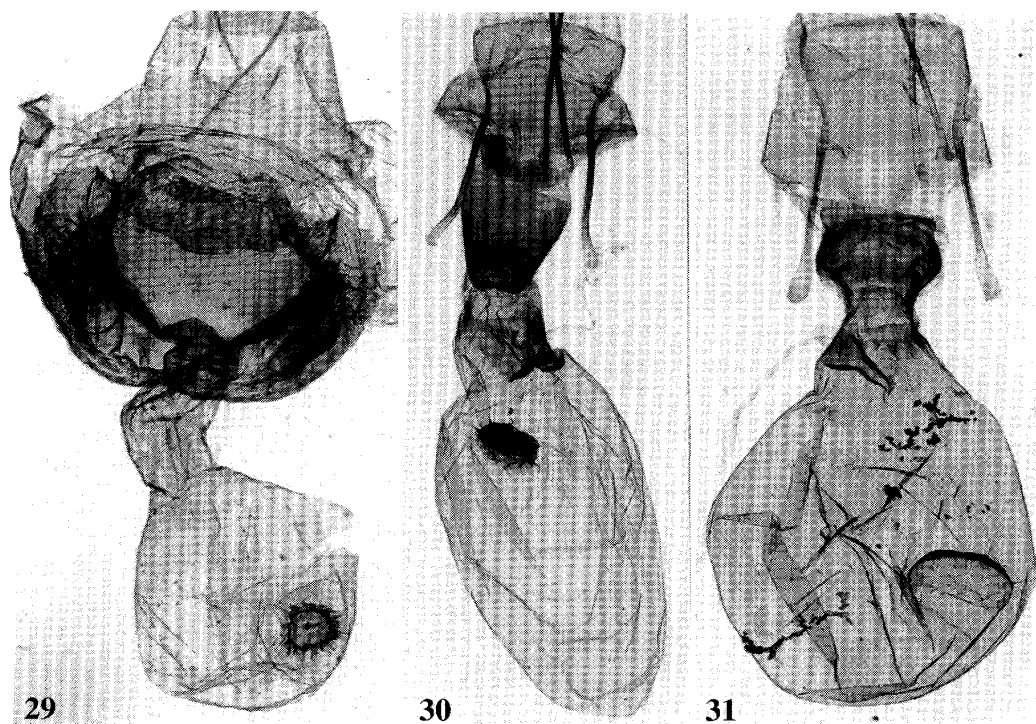
Etymology. The specific name is dedicated to the late Dr Sigeru Moriuti, who was the leader of the Lepidopterological Expeditions of the University of Osaka Prefecture to Thailand.

Recently I described *R. anmashana* from Taiwan based on two pairs of specimens taken at Anmashan, alt. 2,100 m (Sato, 2002). From Japan, two species, *R. basifuscaria* (Leech) (type-species of *Ramobia*) and *R. mediodivisa* Inoue, are known. All the species of the genus are autumn moths, but the holotype of this new species was collected in May. As I mentioned in the original description of *anmashana*, *Boarmia catachrysa* Wehrli, *B. diodontata* Wehrli and *B. catocirra* Wehrli from W. China will be treated as members of *Ramobia*, and one or two new species of the genus will be added from China by Dr Stüning in the near future. All of them are not necessarily autumn species.

To confirm my identification of this species, Dr Stüning kindly compared the male genitalia with those of Chinese species in the ZFMK.

***Abaciscus manoi* sp. nov.** (Figs 19–20)

Male. Length of forewing 20 mm, wingspan 31 mm. Tegula, patagium, abdomen and thoracic vestiture dark greyish brown. Hind tibia with hair-pencil. Third abdominal sternite with a setal comb. Hindwing with crenulate outer margin. Both wings pale yellowish brown irrorated with fuscous black; lines and marks black. Forewing: fovea developed; antemedial line right-angled near costa, then running straight; medial line ill-defined, almost straight; postmedial line deeply excurved beyond cell, then gently incurved to inner margin; weak line reproduced basad of deep curving of postmedial line beyond cell; subterminal



Figs 29–31. Female genitalia. 29. *Ophthalmitis ogatai* sp. nov. RS-4998. 30–31. *Diplurodes* spp.
30. *D. longisacculus* sp. nov. in ZFMK. 31. *D. sakuraii* sp. nov. RS-6263.

band crenulate, margined with a grey line; discocellular marking represented as an acute-angled line on distal edge of cell. Hindwing: antemedial line absent; medial line visible at posterior half; postmedial line angled on vein M_3 ; subterminal band as on forewing; discocellular streak distinct. Underside patterned as on upperside, but paler in colour. Female unknown.

Male genitalia (Fig. 23). Similar to those of *A. karsholti* Sato in valva costa and its inward process. Uncus longer; medial part of gnathos a larger triangle; aedeagus with a heavily sclerotized sinuous process instead of two processes (an elongate band and a roundish lump) in *karsholti*. The male genitalia of *karsholti* were illustrated by Sato (1996: 232, fig. 23).

Holotype. ♂, N. Thailand, Chiang Rai, Wiang Pa Pao, 29. iv–3. v. 2002 (T. Mano), NIAES. Paratypes. N. Thailand. Chiang Mai Prov., Doi Inthanon, 1 ♂, 22. iii. 1998 (A. Pinratana), in Pinratana's Coll., Bangkok. N. Vietnam. Mt Fan-si-pan 1,600 m, 22°17'N 103°44'E, primary forest, 1 ♂, 20–30. iv. 1995 (Sinjaev & local collectors), ZFMK. W. Myanmar. Chin State, way to Mt Victoria, primary forest/pine forest, 2,060 m, 1 ♂, 21°12'N 93°59'E, 3. x. 2002 (W. Mey & S. Naumann), ZFMK.

Geographical range. Thailand, Vietnam, Myanmar.

Etymology. I take pleasure in naming this species after Mr Takahiro Mano, one of my close friends, who collected the type specimen during his trip in Thailand.

Calcyopa rosearia (Joannis)

Ectropis rosearia Joannis, 1929, *Annls Soc. ent. Fr.* **98**: 511.

Calcyopa rosearia: Stüning, 2000, *Tinea* **16** (Suppl.1): 135.

Chiang Mai, Doi Inthanon 1,300 m, 1 ♂, 21. v. 1983 (K. M. A. Y.), Chiang Mai, Doi Pui 1,300 m, 1 ♂, 26–27. x. 1985 (M. S. A.), *ditto* 1,300 m, 1 ♂, 1–4. ix. 1987 (M. S. A. Y.), *ditto* 1,400 m, 2 ♂, 15. v. 2001 (S. Sakurai), Doi Inthanon, Maeo Khun Klang 1,300 m, 9 ♂ 2 ♀, 16–17. x. 1983, Petchabun, Lom Sak, Nam Nao 800 m, 2 ♂, 18–19. viii. 1987 (M. Owada), Chang Rai, Wiang Pa Pao, 1 ♂, 29. iv–3. v. 2002 (T. Mano).

***Calcyopa prasina* Stüning**

Calcyopa prasina Stüning, 2000, *Tinea* **16** (Suppl.1): 135.

Chiang Mai, Doi Pui 1,300 m, 1 ♂, 1–4. ix. 1987 (M. A. Y.), Wiang Pa Pao, Chang Rai, 1 ♂, 29. iv–3. v. 2002 (T. Mano).

This species was recently described from Thailand, Vietnam, Peninsular Malaysia, Myanmar, N. India and Nepal, and the above male specimen from Doi Pui was designated as one of the paratypes (Stüning, 2000).

***Diplurodes vestita* Warren**

Diplurodes vestita Warren, 1896, *Novit. zool.* **3**: 132.

Chiang Mai, Doi Inthanon, Maeo Khun Klang 1,300 m, 1 ♂, 16–17. x. 1983, Doi Inthanon 2,500 m, 1 ♂, 3–5. ix. 1987 (M. Owada), Chang Rai, Wiang Pa Pao, 1 ♀, 1–5. v. 2001 (T. Mano). Doi Inthanon Nat. Park 2,200–2,500 m, 1 ♂, 22–23. x. 1984 (Karsholt, Lomholdt & Nielsen), ZMC. Nan Prov., Pua, Doi Phu Kha, km 35, 1,680 m, 1 ♀, 19. ii. 1993, 1 ♀, 20. ii. 1993, 1 ♀, 24. ii. 1993 (D. Stüning), Chang Mai Prov., Doe Puahompok 2,050 m, 1 ♂ 26–27. xi. 2000 (D. Stüning), ZFMK.

***Diplurodes inundata* Prout**

Diplurodes inundata Prout, 1929, *Novit. zool.* **35**: 74.

Chiang Mai, Doi Pui 1,300 m, 1 ♂, 1–4. ix. 1987 (M. S. A. Y.), Chiang Mai, Doi Chang Khian, 1 ♂, 21. vii. 1981 (K. M. A. Y.), Chang Rai, Wiang Pa Pao, 1 ♂, 29. iv–3. v. 2002 (T. Mano). Doi Suthep 1,325 m, Meo Village View Point, 1 ♀, 22. xi–4. xii. 1989, 1 ♂, 15–25. xi. 1990 (M. Schnitzler), Nan Prov., Pua, Doi Phu Kha 1,680 m, 1 ♂, 1. iii. 1993, Doi Suthep 1,050 m, 1 ♂, 24–25. xi. 2000 (D. Stüning), ZFMK.

***Diplurodes stueningi* sp. nov. (Figs 5–6)**

Male. Length of forewing 14–15 mm, wingspan 23–24 mm. Similar to *inundata* in colour and markings. Both wings almost uniformly greyish brown, while in *inundata* medial area of forewing and basal area of hindwing much paler than the rest. Black band on hindwing more distinct, incurved near inner margin, while in *inundata* less defined, almost straight. Underside of both wings paler than upperside, uniformly coloured as on upperside, with a little darker area distad of postmedial line, while in *inundata* more contrast between distal black and basal white areas. Female unknown.

Male genitalia (Fig. 28). Similar to those of *D. petras* (Meyrick) (Holloway, 1994, fig. 559), but can be easily distinguished by an acute angled triangular projection near basal part of valva. In addition, uncus longer; tongue-like process from tegumen shorter and broader; valva not so acute distally; costa more strongly sclerotized; saccular process sinuous.

Holotype. ♂, Thailand, Nan Prov., Pua, Doi Phu Kha, km 35, 1,680 m, 23. ii. 1993 (D.

Stüning), ZFMK. Paratypes. Type locality, 2 ♂, 16. ii. 1993, 1 ♂, 19. ii. 1993, 1 ♂, 1. iii. 1993 (D. Stüning), ZFMK & NIAES (1 ♂, 16. ii. 1993).

Geographical range. Thailand.

Etymology. The specific name is dedicated to Dr Dieter Stüning, who kindly gave an opportunity to examine the interesting specimens taken in Thailand by himself.

***Diplurodes sakuraii* sp. nov.** (Figs 13–16)

Length of forewing 13–15 mm, wingspan 23–25 mm. Distinguished from the previous two species by greyish wings. More similar to *inundata* than to *stueningi* in that both wings have contrasting colours between dark and pale areas on both sides, but distinguished from *inundata* as follows. Both wings tinged with grey; postmedial line more strongly outcurved beyond cell on forewing; black band incurved near inner margin, as in *stueningi*, on hindwing; proximal margin of distal broad black band on underside, reflecting postmedial line on upperside, more deeply indented beyond cell.

Male genitalia (Fig. 26). Similar to those of the previous species in having a sinuous saccular process, but different from them by absence of a triangular process on valva. Valva rounded apically, while in *stueningi* rather acute; medial process of gnathos densely covered with weak spines, larger and oblong rather than triangular as in *stueningi*.

Female genitalia (Fig. 31). Sterigma surrounding ostium bursae swollen medially, with a transverse sclerotized band; bursa copulatrix with a pair of streaks at left side posteriorly and a large bowl-like signum at right side anteriorly.

Holotype. ♂, N. Thailand, Chiang Mai, Doi Suthep 1,325 m, Meo Village View Point, 15–25. xi. 1990 (M. Schnitzler), ZFMK. Paratypes. Thailand. Chiang Mai, Doi Pui 1,400 m, 2 ♂ 2 ♀, 15. v. 2001 (S. Sakurai), NIAES. Doi Pui 1,400 m, Phu Phing Palace, 1 ♂, 7–9. ix. 1987 (M. Owada), NSMT. Nan Prov., Pua, Doi Phu Kha 1,680 m, 1 ♂ 2 ♀, 18. ii. 1993, 3 ♀, 19. ii. 1993, 1 ♀, 24. ii. 1993 (D. Stüning), *ditto* 1,450 m, 1 ♀, 6. i. 1992 (H. Schnitzler), Doi Suthep 1,325 m, Meo Village View Point, 1 ♂ 1 ♀, 22. xi–4. xii. 1989 (M. Schnitzler), ZFMK. Doi Inthanon, 1 ♀, 19. ix. 1998, Doi Suthep, 1 ♀, 21. i. 2001, 1 ♀, 18. i. 2002 (A. Pinratana), in Pinratana's Coll., Bangkok.

Geographical range. Thailand.

Etymology. The species is named after Mr Sei Sakurai, who captured the four paratypes and donated them to me.

***Diplurodes longisacculus* sp. nov.** (Figs 7–12)

Length of forewing 13–14 mm, wingspan 22–24 mm. Also similar to *inundata*, in the contrasting colours in both wings. Distinguished from *inundata* as follows. Both wings tinged with grey, paler as a whole; postmedial lines more deeply outcurved beyond cell and between veins Cu_1 and Cu_2 ; proximal margin of distal broad black band more deeply indented beyond cell as in *sakuraii*.

Male genitalia (Fig. 27). Quite different from those of the congeners in the presence of a very long saccular process. Valva with a basal process as in *stueningi*, but much smaller in size and digitate rather than triangular. Tongue-like process from tegumen semi-circular; medial part of gnathos triangular, longer than wide; valva rounded apically, costa weakly and widely sclerotized, saccular whip-like process extending beyond tegumen, gradually

curved apically, with small conical process basally.

Female genitalia (Fig. 30). Sterigma widely sclerotized, tapered anteriorly, anterior sides heavily sclerotized; bursa copulatrix with weakly sclerotized square band near posterior end, with a large bowl-like signum at left side posteriorly.

Holotype. ♂, N. Thailand, Chiang Mai, Doi Suthep 1,325 m, Meo Village View Point, 22. xi–4. xii. 1989 (M. Schnitzler), ZFMK. Paratypes. Thailand. Same data as holotype, 2 ♂, Doi Suthep 1,050 m, 2 ♀, 24–25. xi. 2000 (D. Stüning), ZFMK. Chiang Mai, Doi Inthanon, 1 ♀, 20. xi. 1998 (A. Pinratana), in Pinratana's Coll., Bangkok. Doi Inthanon, Maeo Khun Klang 1,300 m, 1 ♀, 16–17. x. 1983 (M. Owada), NSMT. Peninsular Malaysia. Pahang, Cameron Highlands, G. Berinchang 1,950 m, 1 ♂, 21–22. vii. 1987 (M. Owada), NSMT.

Geographical range. Thailand, Peninsular Malaysia.

Etymology. This new species is named "*longisacculus*" because of the presence of a pair of very long saccular processes in the male genitalia.

Remarks. Another new species, similar to *longisacculus* in appearance, was collected from Thailand. It is related to *D. tanakai* Sato, 1999, from the Philippines, and is distributed not only in Thailand, but also in Vietnam, Borneo and Sumatra. It will be described in my future paper on the Boarmiini of Sumatra.

Ectropidia shoreae (Prout)

Diplurodes shoreae Prout, 1934, *Novit. zool.* **39**: 122.

Ectropidia shoreae: Holloway, 1994, *Malay. Nat. J.* **47**: 258.

Chiang Mai, Doi Pui 1,300 m, 1 ♀, 30. v. 1983 (K. M. A. Y), *ditto* 1,400 m, 2 ♂ 10 ♀, 15. v. 2001 (S. Sakurai), Doi Pui, Doi Phu Phing Palace 1,400 m, 1 ♂, 7–9. ix. 1987 (M. Owada), Doi Suthep 600 m, 1 ♀, 20. v. 1983 (K. M. A. Y), Chang Mai, Doi Chang Khian, 1,250 m, 2 ♀, 27. v. 1983 (K. M. A. Y.), Chang Rai, Wiang Pa Pao, 1 ♂ 1 ♀, 1–5. v. 2001, 1 ♀, 29. iv–3. v. 2002 (T. Mano).

Acknowledgements

I wish to express my sincere appreciation to the late Dr S. Moriuti, the former professor of Osaka Prefecture University, for giving me the opportunity to examine many Thai specimens of the Boarmiini. I am much indebted to Dr D. Stüning (ZFMK) and Mr M. Sommerer (Munich) for their kind help in giving useful advice and providing data on the specimens under their care, and to Mr D. Carter (BMNH), Mr G. Martin (BMNH), Dr O. Karsholt (ZMC) and Dr M. Owada (NSMT) for their permission to study specimens under their curation. I deeply thank Dr H. Inoue (Iruma), for his critical reading of the early version of the manuscript. My thanks are also due to Messrs T. Mano (Aichi) and S. Sakurai (Niigata) for the gift of the specimens collected by them.

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摘 要

タイ国産 Boarmiini (シャクガ科エダシャク亜科) の記録 (第4報) (佐藤力夫)

筆者 (1991, 1995, 1996) は, これまでに大阪府立大学 (1981, 1983, 1985, 1987) と国立科学博物館 (1983, 1987) が実施したタイ国鱗翅類調査によって得られた資料をもとに, シャクガ科エダシャク亜科 Boarmiini 族に属する種を記録してきた. 本報では, *Ophthalmitis*, *Ramobia*, *Abaciscus*, *Calcyopa*, *Diplurodes*, *Ectropidia* の6属13種を扱った. そのうち次の6種を新種として記載した.

Ophthalmitis ogatai Sato (Thailand, P. Malaysia, Sumatra), *Abaciscus manoi* Sato (Thailand), *Diplurodes stueningi* Sato (Thailand), *Diplurodes sakurarii* Sato (Thailand), *Diplurodes longisacculus* Sato (Thailand, P. Malaysia), *Ramobia moriutii* Sato (Thailand).

なお, 長くご指導いただいた森内茂博士 (2001年9月逝去) と緒方正美博士 (2004年8月逝去) に感謝と哀悼の意を表すため, それぞれ *Ramobia* と *Ophthalmitis* の種小名として両博士のご尊名を奉獻させていただいた.

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